Cytogenetics of Backcross I Self-fertile Derivatives Involving Wheat and Perennial Triticeae Species. (C01mujeebkazi163940-Poster)

Authors:

- V.Rosas* CIMMYT
- A.Cortes CIMMYT
- R.Delgado CIMMYT
- A.Mujeeb-Kazi CIMMYT

Abstract:

Bread wheat cultivars when hybridized with alien Triticeae species yield perennial F1 intergeneric hybrids with normal cytogenetics and possess half the chromosomes of each parent. The F1 hybrids when colchicine treated may produce amphiploids. These after emasculation and pollination by a bread wheat cultivar become a source of the backcross I (BCI) progeny. Alternatively, the self-sterile but female-fertile perennial F1 hybrid, can be directly pollinated by bread wheat to yield BCI progeny similar to what ensues from the amphiploid route. This alternate route extends the range of alien diversity for agricultural utility and is swifter. All BCI derivatives express phenotypic co-dominance, with cytogenetic stability being greater at the 2n=8x=56 level versus those that are 2n=9x=63. The latter, often eliminate a genome and drop to the 56 chromosome level. Maintenance by selfing allows the related alien genomes to recombine leading to possible structural changes of practical value. BCI documentation and their practical utility is presented.

Corresponding Author Information:

Abdul Mujeeb-Kazi

International Maize and Wheat Improvement

Center

Apdo. 370, P.O. Box 60326 Houston, TX 60326 MEXICO

Presentation Information:

Presentation Date: Wednesday, November 13, 2002 Presentation Time: 4:00-6:00 pm

phone: 650-833.6655 fax: 650-833-6656 e-mail: m.kazi@cgiar.org Poster Board Number: 735

Keywords:

Intergeneric hybridization, Cytogenetics, Wheat